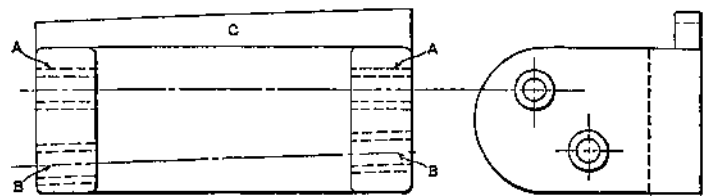


the jig it must be considered whether it will be used continuously and what degree of accuracy will be required. When extreme accuracy is required there should be a bar provided with cutting tools for each operation to be performed. It is cheaper, of course, to use the same bar as far as possible for different operations, and ordinarily, satisfactory results are obtained in this way. It is desirable to have bushings fitting



**Fig. 5. Jig for Boring Holes
located at an Angle to Each Other**

J

D

**Fig. 6. Diagram illustrating
Principle of Multiple-bar Boring
Jig**

each bar, but often this expense can be reduced by using the same bushings for bars having the same diameter.

When Holes are not Parallel. — It sometimes happens that one or more holes form an angle with the axis of other holes in the

work to be bored. In the jig shown in Fig. 5, the bushings *A* guide one bar for boring one hole and the bushings *B* the bar for boring another hole, the axis of which is at an angle with the axis of the first hole in the horizontal plane. Then an angle-plate *C* can be made in such a manner that if the jig is placed with the tapered side of plate *C* against a parallel, the hole *B* will be parallel with the spindle. This arrangement